2003 CTS AMENDMENTS
to the
Information Processing
Guide to Standards and Implementation

Summary of Curriculum Changes

Course withdrawals:
- INF1010: Computer Operations
- INF1090: Information Highway 1

Section B

1. **Remove** pages B.5 and B.7–B.8 (Revised 2002) and **replace** with new pages B.5 and B.7–B.8 (Revised 2003).

Section C

1. **Remove** page C.3 (Revised 1999) and **replace** with new page C.3 (Revised 2003).

Section D

1. **Remove** pages D.1–D.2 (Revised 2002) and **replace** with new pages D.1–D.2 (Revised 2003).
2. **Remove** pages D.3–D.6 (Revised 1999) and **replace** with new page D.3–D.6 (Revised 2003).
3. **Remove** pages D.41–D.44 (Revised 2002) and **replace** with new page D.41–D.44 (Revised 2003).

Section G

1. **Remove** page G.3 (Revised 2002) and **replace** with new page G.3 (Revised 2003).
2. **Remove** pages G.37–G.40 (1997) and **replace** with new page G.37–G.40 (Revised 2003).

Section H
1. **Remove** pages H.6–H.8 (1999/1997) and **replace** with new pages H.6–H.8 (Revised 2003).
2. **Remove** pages H.11–H.13 (1997) and **replace** with new pages H.11–H.13 (Revised 2003).

| INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
	Workstation Operations INF2010	Hardware/Software Analysis INF3010	System Operations
		Local Area Networks INF3020	
	Telecommunications 1 INF2190	Telecommunications 2◆ INF3180	
Keyboarding 1 INF1020	Keyboarding 2 INF2030	Keyboarding 4 INF3030	Text/Data Input
	Keyboarding 3 INF2040	Keyboarding 5 INF3040	
		Keyboarding 6 INF3050	
Word Processing 1 INF1030	Word Processing 2◆ INF2050	Word Processing 3◆ INF3060	Productivity Software
Graphics Tools INF1040	Electronic Publishing 1◆ INF2060	Electronic Publishing 2 INF3070	
Database 1 INF1050	Database 2 INF2070	Information Management Tools INF3080	
Spreadsheet 1 INF1060	Spreadsheet 2 INF2080		
Hypermedia Tools INF1070	Multimedia Authoring 1 INF2130	Multimedia Authoring 2 INF3130	
	Correspondence◆ INF2090	Specialization 1◆ INF3100	Applied Processing
	Reports◆ INF2100	Specialization 2◆ INF3110	
	Tables/Forms◆ INF2110	Software Integration 2 INF3120	
	Software Integration 1◆ INF2120	Software Integration 3◆ INF3090	
	Information Highway 2 INF2200	Information Highway 3 INF3190	Dynamic Environment
		Internet Services INF3200	
	Process Control◆ INF2140	Expert Systems◆ INF3140	

(continued)

——— Prerequisite   - - - - Recommended sequence
◆ Refer to specific courses for additional prerequisites.
Note: Computer Operations and Information Highway 1 have been withdrawn effective September 2003.

INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
Programming 1 *INF1080*	Programming 2 *INF2150*		Programming
	Programming 3 *INF2160*	Programming Application 1 *INF3150*	
	Programming 4 *INF2170*	Programming Application 2 *INF3160*	
	Programming 5 *INF2180*	Programming Application 3 *INF3170*	
	Object-oriented Programming 1 ◆ *INF2220*	Object-oriented Programming 2 *INF3220*	
		Dynamic Data Structures 1 ◆ *INF3230*	
		Dynamic Data Structures 2 *INF3240*	
Computer Science 1 *INF1210*	Computer Science 2 *INF2210*	Computer Science 3 *INF3210*	Computer Science
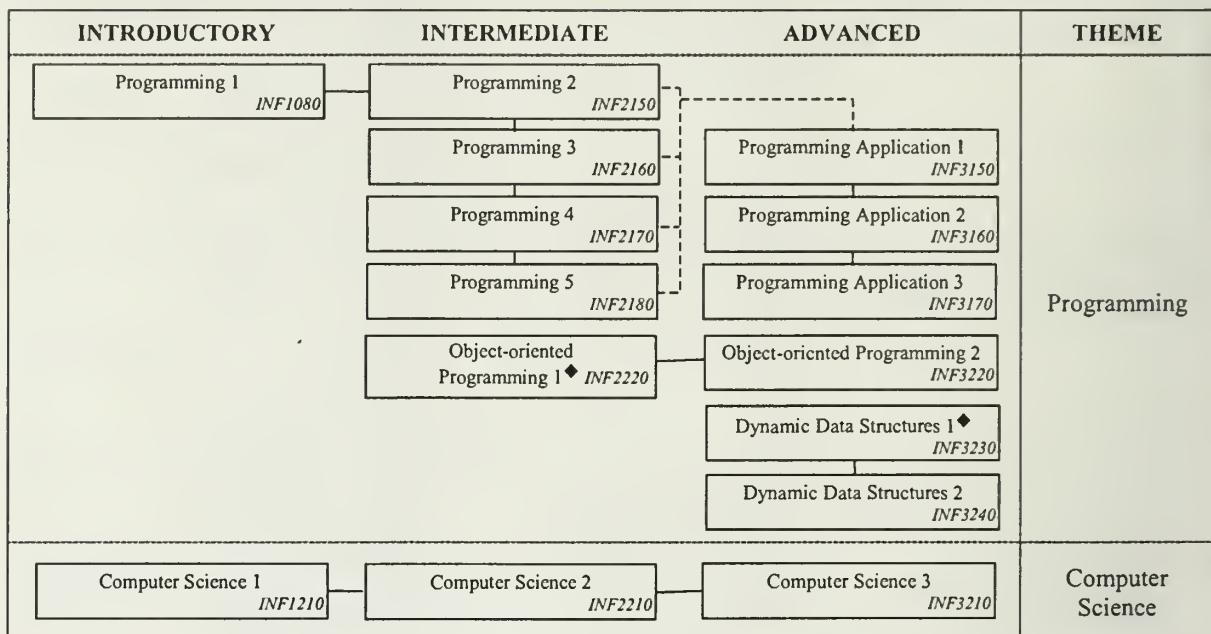
——— Prerequisite   - - - - - Recommended sequence

◆ Refer to specific courses for additional prerequisites.

COURSE DESCRIPTIONS

Course INF1020: Keyboarding 1
Students develop accurate touch keystroking of text and data appropriate to personal use and the application of efficient workstation procedures.

Course INF1030: Word Processing 1
Students develop skill in using basic commands and functions in word processing software, including document editing, and the formatting and printing of reports, correspondence and tables suitable for personal use applications.

Course INF1040: Graphics Tools
Students learn the basic commands and functions of computer graphics software, including bitmapped graphics (paint program) and vector graphics (draw program). Students also develop basic skills in manipulating existing graphics, as well as in producing their own graphics.

Course INF1050: Database 1
Students are introduced to the basic commands and functions of database software, and demonstrate how this software can be used as a personal tool in data and information management.

Course INF1060: Spreadsheet 1
Students have an opportunity to use basic functions and commands in spreadsheet software for general data manipulation and personal record keeping.

Course INF1070: Hypermedia Tools
Students develop basic skills with tools used for computerized presentations involving text, data, graphics, sound and animation.

Course INF1080: Programming 1
Students are introduced to computer programming languages and a structured programming environment, and they construct algorithms and code instructions to solve identified problems.

Course INF1210: Computer Science 1
Students are introduced to the nature, approaches and areas of interest of computer science and its relationship to areas, such as computer engineering and information technology. Students explore concepts associated with hardware, software and processes at an introductory level. There is an emphasis on sequential and structured programming approaches.

Course INF2010: Workstation Operations
Students learn computer workstation operations, including computer architecture, peripherals, configurations, operating system environments and platforms, utility software, diagnostic and protection software, hard drive file updating and maintenance, support resource application and troubleshooting activities.

Course INF2030: Keyboarding 2
Students enhance their personal use keyboarding competencies by increasing the rate of accurate touch keystroking of the alphabetic, numeric and selected punctuation keys.

Course INF2040: Keyboarding 3
Students enhance their keyboarding competencies, by increasing the rate of accurate touch keystroking of alphabetic, numeric and all punctuation keys to support personal use and limited, entry-level, workplace opportunities.

Course INF2050: Word Processing 2
Students expand their skills in using word processing software commands and functions to produce mailable reports and correspondence, including letters, memorandums and tables, all from rough draft copy.

Course INF2060: Electronic Publishing 1
Students develop skill, using electronic/desktop publishing software to create a variety of camera-ready documents.

Course INF2070: Database 2
Students use all the commands and functions of electronic database software that support effective and efficient database applications.

Course INF2080: Spreadsheet 2
Students demonstrate advanced level spreadsheet commands and functions to calculate and manipulate data and to prepare appropriate reports and printouts in text and graphic format.

Course INF2090: Correspondence
Students expand their rate of document production as they prepare various forms of correspondence in mailable form, using word processing software.

Course INF2100: Reports
Students expand their rate of production as they prepare various reports and manuscripts in mailable form.

Course INF2110: Tables/Forms
Students expand their rate of document production as they prepare various tables/forms in mailable form.

Course INF2120: Software Integration 1
Students develop document production skills requiring the integration of data, text and graphics.

Course INF2130: Multimedia Authoring 1
Students are introduced to multimedia software and provided with an opportunity to develop basic authoring competence, by accessing and integrating software resident text, video and audio clips.

Course INF2140: Process Control
Students develop skills in robotics/simulation software control by creating, modifying and using programs that incorporate computer-controlled movements and events in robotics/simulation activities and applications.

Course INF2150: Programming 2
Students increase their programming skills, by designing and generating programming code to handle decision making and repetitive processes.

Course INF2160: Programming 3
Students increase their programming skills, by using subprogram structures.

Course INF2170: Programming 4
Students increase their programming skills, by developing and using derived data types.

Course INF2180: Programming 5
Students increase their programming skills, by developing and using recursive, sorting and merging algorithms.

Course INF2190 Telecommunications 1
Students learn how to select and use various wired and wireless telecommunication systems. By using the Internet, they investigate how communication principles, bandwidth, telecommunication infrastructure and wave spectrum affects telecommunication systems.

Course INF2200: Information Highway 2
Students learn how to produce a web page for the Internet.

Course INF2220: Object-oriented Programming 1
Students are introduced to object-based programming (OBP) and object-oriented programming (OOP). They develop algorithms, using introductory object-oriented design techniques, and use these algorithms to write introductory object-based and object-oriented programs.

Course INF2210: Computer Science 2
Students extend their knowledge of the discipline of computer science by exploring the modular paradigm and its impact on algorithm development and implementation (programming). Students also add to their understanding by exploring the stylized von Neumann computer system at the machine level, and by examining the impact of computer science and computer technology on society.

Course INF3010: Hardware/Software Analysis
Students analyze, compare and evaluate hardware/software based on user requirements.

Course INF3020: Local Area Networks
Students learn about local area network (LAN) computer systems, including hardware and peripheral configurations, interface protocols and data transmission characteristics.

Course INF3030: Keyboarding 4
Students develop their text and data keyboarding skills to entry-level occupational expectations.

PLANNING FOR INFORMATION PROCESSING

The following suggestions are provided to assist teachers, schools and school system administrators as they plan to deliver courses in the Information Processing strand.

Selecting Courses

The scope and sequence chart in Section B provides an overview of the Information Processing courses, indicating prerequisites and theme areas. Brief descriptions of each of the courses follow the scope and sequence chart in Section B.

Information Processing in Junior High

The introductory level courses may be offered at junior high. Because many students entering junior high school may be familiar with computers, it is important to determine the level of competence students have in relation to the competencies defined for the courses.

The number of courses offered will vary according to the time available throughout Grades 7, 8 and 9:

Time Available	Courses
25 hours	Workstation Operations
50 hours	Workstation Operations Keyboarding 1
75–100 hours	add one of the following: Word Processing 1 Graphics Tools Database 1 Spreadsheet 1 Hypermedia Tools Programming 1

Where appropriate, junior high school students may also take intermediate level courses, particularly in the Text/Data Input and Productivity Software themes.

Courses may be combined into courses and offered within a school year or over a span of a few years.

Information Processing in Senior High

Following are a few examples of course groupings into sample courses:

|	
5 credits (no previous experience)	Workstation Operations Keyboarding 1 Word Processing 1 Database 1 Spreadsheet 1
3 credits (strong background from junior high school or through personal experience)	Keyboarding 1 Database 1 Spreadsheet 1
5–15 credits (foundation for entry into workplace as computer technician)	Workstation Operations Keyboarding 1 Word Processing 1 Database 1 Spreadsheet 1 and courses selected from System Operations theme and Programming theme
5–15 credits (foundation for entry into workplace into administrative support positions)	Keyboarding 2 Word Processing 2 Database 2 Spreadsheet 2 Electronic Publishing 1 and courses selected from the Applied Processing theme and Productivity Software theme

Courses could also be clustered into multiple-credit offerings that emphasize a particular theme.

Organizing for Learning

Before selecting courses, teachers should check the course parameters outlined in each course (see Sections D, E and F of this Guide).

Individual 1-credit courses can be delivered sequentially, concurrently or combined. For example, although the courses in the Text/Data Input theme and the Programming theme are sequential, they can be combined with courses from the System Operations theme, the Productivity Software theme, or the Applied Processing theme; e.g.:

Scenario A

Sept.	Courses may be taught sequentially, e.g.:
1 → 2 → 3 → Jan./June	Programming 1 ↓ Programming 2 ↓ Programming 3

Scenario B

Sept.	
1, 2, 3 → Jan./June	One course, such as Keyboarding 1, may be taught throughout the term (e.g., 20 minutes per class) in conjunction with two other courses.
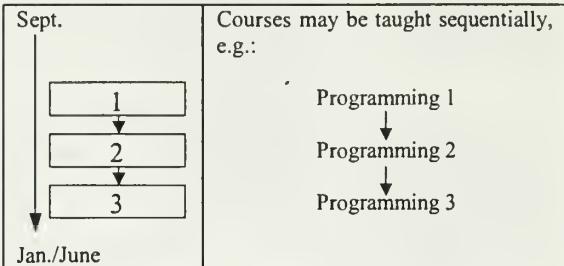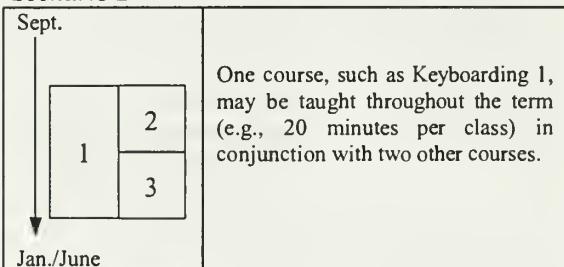
Teachers can also allow students to progress at a rate that is personally challenging; e.g.:

Scenario C

Sept.	
→ Jan./June	All students take one or two common courses together, then are able to select other courses from a menu of courses made available to them.

Scenario D

Sept.	
→ Jan./June	From a list of courses identified by the teacher, the students select which ones they will work on and, in consultation with the teacher, establish timelines for completion and submission of assignments, etc.
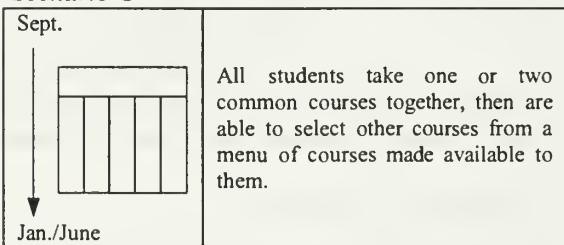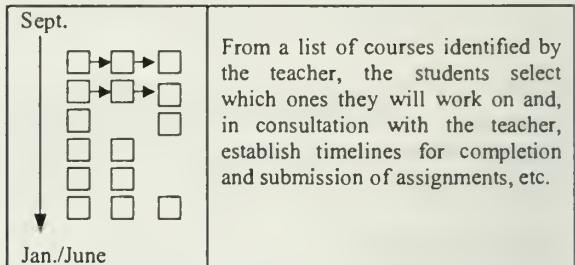
Recurring Concept—Workstation Management

Each course in Information Processing requires students to consistently apply appropriate workstation routines. This requires students to demonstrate responsibility and professionalism throughout the instruction period as they:

- manage and use the workstation and related resources
- make efficient and effective use of their own and others' time
- learn in as independent a manner as possible
- use related terminology appropriately, both verbally and in print.

An emphasis of 10 percent has been allocated in each course for workstation management.

Identifying Linkages

Section H of this Guide describes some of the linkages that are possible between the Information Processing strand and other CTS strands.

Project and practicum courses are **not** designed to be offered as distinct courses and should **not** be used to extend Work Experience 15, 25 and 35 courses.

Improving Smooth Transition to the Workplace and/or Related Post-secondary Programs

Refer to Section H of this Guide for potential transitions students may make into the workplace and/or related post-secondary programs or other avenues for further learning.

COURSE CURRICULUM AND ASSESSMENT STANDARDS:

INTRODUCTORY LEVEL

The following pages define the curriculum and assessment standards for the introductory level of Information Processing.

Introductory level courses help students build daily living skills and form the basis for further learning. Introductory courses are developed for students who have no previous experience in the strand.

General outcomes define the competencies a student must demonstrate to achieve success in a course. Assessment standards define the conditions and criteria to be used for assessing the competencies defined in the course learner expectations.

Specific outcomes provide a detailed framework for instruction to help students build the competencies defined in the general outcomes. Additional information and suggestions for instruction are provided in the Notes column; teachers may wish to use this space to record their ideas for instruction or student projects.

Note:

*INF1010: Computer Operations
(pages D.3–D.6) has been withdrawn
effective September 2003.*

TABLE OF CONTENTS

Note:

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The following tools have been deleted, effective September 2003.

- *Assessment Checklist: INF1010–1 (page G.37)*
- *Assessment Guide: Presentations and Reports INF1010–2 (page G.38)*
- *Assessment Guide: Information Highway 1 INF1090–1 (page G.39)*
- *Assessment Guide: Workstation Operations INF2010–1 (page G.40)*

The following linkages identify broad connections to core programs in junior and senior high.

Language Arts and English Social Studies	supporting the research and writing process: • Keyboarding 1–5 • Word Processing 1–3 • Graphics Tools, Electronic Publishing 1–2
Mathematics and Science	supporting problem solving and the organizing, analyzing and presenting of data: • Word Processing 1–3 • Electronic Publishing 1–2 • Spreadsheet 1–2 • Database 1–2 • Information Management Tools • Software Integration 1–3 • Programming 1–5 • Programming Application 1–3

With Practical Arts Courses

Courses in the Information Processing strand replace existing content in the senior high Business Education 10–20–30, Typewriting 10–20–30 and Computer Programming 10–20–30. A detailed correlation of the Information Processing strand to these practical arts courses can be found in this section (see "Information Processing-Correlations with Business Education 10–20–30 and Typewriting 10–20–30," page H.9, "Computer Processing 10–20–30," page H.11, and "Information Processing-Correlations with Practical Arts Courses," page H.13).

TRANSITIONS

To the Community/Workplace

The National Occupational Classification (NOC) chart indicates occupations for which Information Processing provides a foundation. High school students could potentially move into:

• 12 occupations requiring a high school education

• 18 occupations that require further education at a college or technical institution (possibly obtaining advanced standing or preferred entrance in the post-secondary program)
• 10 occupations that require further education at the university level (possibly obtaining preferred entrance into a program).

Information from the National Occupational Classification (NOC) regarding occupations in information processing-related areas that can be accessed upon completion of high school is provided in this section (see "Information Processing: Related Occupations," page H.17).

To Related Post-secondary Programs

An outline of post-secondary institutions in Alberta currently offering programs in information processing-related areas is provided in this section (see "Information Processing: Summary of Related Post-secondary Programs," page H.18).

Information Processing: Connections With Other CTS Strands

Information Processing Courses	Agriculture	Career Transitions	Communication Technology	Community Health	Construction Technologies	Cosmetology Studies	Design Studies	Energy and Mines	Electro Technologies	Enterprise and Innovation	Fashion Studies	Financial Management	Foods	Fabrication Studies	Forestry	Legal Studies	Logistics	Management and Marketing	Mechanics	Tourism Studies	Wildlife
Theme: System Operations																					
INF2010: Workstation Operations									■												
INF3010: Hardware/Software Analysis									■												
INF3020: Local Area Networks									■												
INF2190 Telecommunications 1									■												
INF3180 Telecommunications 2									■												
Theme: Text/Data Input																					
INF1020: Keyboarding 1																					
INF2030: Keyboarding 2																					
INF2040: Keyboarding 3																					
INF3030: Keyboarding 4																					
INF3040: Keyboarding 5																					
INF3050: Keyboarding 6																					
Theme: Productivity Software																					
INF1030: Word Processing 1																					
INF1040: Graphics Tools			■				■			■								■		■	
INF1050: Database 1												■						■			
INF1060: Spreadsheet 1												■						■			
INF1070: Hypermedia Tools							■														
INF2050: Word Processing 2																					
INF2060: Electronic Publishing 1			■				■											■			
INF2070: Database 2																		■			
INF2080: Spreadsheet 2																					
INF2130: Multimedia Authoring 1							■														
INF3060: Word Processing 3																					
INF3070: Electronic Publishing 2			■				■											■			
INF3080: Information Management Tools																					
INF3130: Multimedia Authoring 2							■														
Theme: Applied Processing																					
INF2090: Correspondence		■																■			
INF2100: Reports																					
INF2110: Tables/Forms																					
INF2120: Software Integration 1																					
INF3090: Sotware Integration 3																					
INF3100: Specialization 1																					
INF3110: Specialization 2																					
INF3120: Software Integration 2																					
Theme: Dynamic Environment																					
INF2140: Process Control									■					■							
INF2200: Information Highway 2									■					■				■			
INF3140: Expert Systems	■				■				■					■							■
INF3190: Information Highway 3									■					■							
INF3200: Internet Services									■												
Theme: Programming																					
INF1080: Programming 1									■												
INF2150: Programming 2									■												
INF2160: Programming 3									■												
INF2170: Programming 4									■												
INF2180: Programming 5									■												

Information Processing: Connections Across the Curriculum

Across the Curriculum

Information Processing Courses	Junior High							Senior High											
	Language Arts	Social Studies	Mathematics	Science	Health & PLS	Physical Education	Fine Arts	English	Social Studies	Mathematics	Science (General)	Biology	Chemistry	Physics	CALM	Physical Education	Fine Arts	Social Sciences	Second Language
Theme: System Operations																			
INF2010: Workstation Operations																			
INF3010: Hardware/Software Analysis																			
INF3020: Local Area Networks																			
INF2190: Telecommunications 1																			
INF3180: Telecommunications 2																			
Theme: Text/Data Input																			
INF1020: Keyboarding 1																			
INF2030: Keyboarding 2																			
INF2040: Keyboarding 3																			
INF3030: Keyboarding 4																			
INF3040: Keyboarding 5																			
INF3050: Keyboarding 6																			
Theme: Productivity Software																			
INF1030: Word Processing 1																			
INF1040: Graphics Tools																			
INF1050: Database 1																			
INF1060: Spreadsheet 1																			
INF1070: Hypermedia Tools																			
INF2050: Word Processing 2																			
INF2060: Electronic Publishing 1																			
INF2070: Database 2																			
INF2080: Spreadsheet 2																			
INF2130: Multimedia Authoring 1																			
INF3060: Word Processing 3																			
INF3070: Electronic Publishing 2																			
INF3080: Information Management Tools																			
INF3130: Multimedia Authoring 2																			
Theme: Applied Processing																			
INF2090: Correspondence																			
INF2100: Reports																			
INF2110: Tables/Forms																			
INF2120: Software Integration 1																			
INF3090: Software Integration 3																			
INF3100: Specialization 1																			
INF3110: Specialization 2																			
INF3120: Software Integration 2																			
Theme: Dynamic Environment																			
INF2140: Process Control																			
INF2200: Information Highway 2																			
INF3140: Expert Systems																			
INF3190: Information Highway 3																			
INF3200: Internet Services																			
Theme: Programming																			
INF1080: Programming 2																			
INF2150: Programming 2																			
INF2160: Programming 3																			
INF2170: Programming 4																			
INF2180: Programming 5																			
INF3150: Programming Application 1																			

LINKAGES — *Information Processing in Junior High*

Course Emphasis	Information Processing Courses	Management & Marketing Courses	Communication Technology Courses	Design Studies Courses
(Theme 1) Design (3 courses)	Workstation Operations *INF2010* Graphics Tools *INF1040*			The Design Process *DES1020*

Course Emphasis	Information Processing Courses	Management & Marketing Courses	Communication Technology Courses	Electro-Technologies Courses
(Theme 2) Programming (4 courses)	·Workstation Operations *INF2010* Programming 1 *INF1080*			Digital Technology 1 *ELT1060* Robotics 1 *ELT1130*

Course Emphasis	Information Processing Courses	Management & Marketing Courses	Communication Technology Courses	
(Theme 3) Written Communications (5 courses)	Workstation Operations *INF2010* Keyboarding 1 *INF1020* Word Processing 1 *INF1030* Information Highway 2 *INF2200*	Communication Strategies 1 *MAM1030*		

Course Emphasis	Information Processing Courses	Management & Marketing Courses	Communication Technologies Courses	Design Studies Courses
(Theme 4) Visual Communication (5 courses)	Graphics Tools *INF1040* Hypermedia Tools *INF1070*		Media & You *COM1020* Animation 1 *COM1070*	The Design Process *DES1020*

Computer Processing 10–20–30

Information Processing Courses	Workstation Operations	Graphics Tools	Database 1	Database 2	Spreadsheet 1	Spreadsheet 2	Hypermedia Tools	Programming 1	Programming 2	Programming 3	Programming 4	Programming 5	Programming Applications 1	Programming Applications 2	Programming Applications 3	Process Control	Expert Systems	Local Area Networks	Hardware/Software Analysis
Module 1: Computer Information Processing																			
• Evolution of Data Processing																			
• Terminology																			
• Characteristics of Information Systems																			
• Information Processing Environment																			
• Data Communications																			
• Issues and Trends																			
Module 2: Overview of Software																			
• Terminology	✓																		
• Legal Constraints of Use of Software	✓																		
• Proper Handling Techniques	✓																		
• Types of Software	✓																		
• Software Applications	✓																		
• Software Use Procedures	✓																		
Module 3: Applications: Data Entry																			
• Data Entry Functions			✓	✓															✓
• Coding Data			✓	✓															✓
• Data Entry Functions			✓	✓															✓
• Generating Reports			✓	✓															✓
Module 4: Applications: Word Processing																			
• Introduction to Information Processing																			
• Software Commands																			
• Input/Output																			

† September 1997: All practical arts courses replaced by Career and Technology Studies.

Linkages/Transitions

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CTS, Information Processing /H.11

(Revised 2003)

LINKAGES: *Information Processing: Correlations with Practical Arts Courses:†* *Computer Processing 10–20–30* (continued)

Information Processing Courses	Workstation Operations	Graphics Tools	Database 1	Database 2	Spreadsheet 1	Spreadsheet 2	Hypermedia Tools	Programming 1	Programming 2	Programming 3	Programming 4	Programming 5	Programming Applications 1	Programming Applications 2	Programming Applications 3	Process Control	Expert Systems	Local Area Networks	Hardware/Software Analysis
Module 5: Applications: Computer Simulations				✓															
Module 6: Applications: Data Base			✓																
Module 7: Applications: Electronic Spreadsheet					✓	✓													
Module 8: Overview of Introductory Programming Language								✓											
Module 9: Fundamentals of Input/ Output								✓											
Module 10: Introduction to Advanced Computer Programming Techniques									✓										
Module 11: Advanced Computer Programming Techniques										✓									
Module 12: Extended Programming Project											✓								
Module 13: Introduction to Second Programming Language												✓	✓						
Module 14: Applications in Second Programming Language													✓	✓					
Module 15: Extended Project in Second Programming Language														✓	✓				
Module 16: Graphics		✓																	
Module 17: Systems Analysis and Program Development																	✓		✓
Module 18: Machine/Assembly Language												✓		✓	✓				

† September 1997: All practical arts courses replaced by Career and Technology Studies.

Typing 10–20–30, Business Education 10–20–30 and Computer Processing 10–20–30

	INTRODUCTORY							INTERMEDIATE	
	Keyboarding 1	Word Processing 1	Graphics Tools	Database 1	Spreadsheet 1	Hypermedia Tools	Programming 1	Workstations Operations	Telecommunications 1
Typewriting 10–20–30									
Module 1: Keyboarding	✓								
Module 2: Keyboarding, Centring and Tabulation	✓	✓							
Module 3: Letters and Essays		✓							
Module 4: Reports		✓							
Module 5: Letters and Tables		✓							
Module 6: Manuscripts									
Module 7: Tables, Business Forms and Financial Reports		✓							
Module 8: Business Correspondence		✓							
Module 9: Specialized Production Applications									
Module 10: Production Projects and Review									
Module 11: Professional Applications I									
Module 12: Professional Applications II									
Module 13: Simulation I									
Module 14: Simulation II									
Business Education 10–20–30									
Module 12: Dicta Typing 1									
Module 13: Dicta Typing 2									
Module 14: Word Processing 1		✓							
Module 15: Word Processing 2									
Module 16: Business Simulation									
Computer Processing 10–20–30									
Module 1: Computer Information Systems									
Module 2: Overview of Software								✓	
Module 3: Applications: Data Entry				✓					
Module 4: Applications: Word Processing									
Module 5: Applications: Computer Simulations									
Module 6: Applications: Data Base				✓					
Module 7: Applications: Electronic Spreadsheet					✓				
Module 8: Overview of Introductory Programming Language							✓		
Module 9: Fundamentals of Input/Output							✓		
Module 10: Intro to Advanced Computer Programming Techniques									
Module 11: Advanced Computer Programming Techniques									
Module 12: Extended Programming Project									
Module 13: Intro to Second Programming Language									
Module 14: Applications in Second Programming Language									
Module 15: Extended Project in Second Programming Language									
Module 16: Graphics			✓						
Module 17: Systems Analysis and Program Development									
Module 18: Machine/Assembly Language									

† September 1997: All practical arts courses replaced by Career and Technology Studies.

Linkages/Transitions

CTS, Information Processing /H.13
(Revised 2003)

LINKAGES: *Information Processing: Correlations with Practical Arts Courses:†*
Typing 10–20–30, Business Education 10–20–30 and Computer Processing 10–20–30 (continued)

Module	Keyboarding 2	Keyboarding 3	Word Processing 2	Electronic Publishing 1	Database 2	Spreadsheet 2	Multimedia Authoring 1	Correspondence	Reports	Tables/Forms	Software Integration 1	Information Highway 2	Process Control	Programming 2	Programming 3	Programming 4	Programming 5
Typewriting 10-20-30																	
Module 1: Keyboarding	✓	✓	✓														
Module 2: Keyboarding, Centring and Tabulation	✓	✓	✓														
Module 3: Letters and Essays			✓	✓													
Module 4: Reports			✓	✓				✓			✓						
Module 5: Letters and Tables			✓	✓				✓	✓	✓							
Module 6: Manuscripts			✓	✓				✓			✓						
Module 7: Tables, Business Forms and Financial Reports			✓	✓				✓	✓		✓						
Module 8: Business Correspondence				✓				✓			✓						
Module 9: Specialized Production Applications				✓				✓	✓	✓	✓						
Module 10: Production Projects and Review				✓							✓						
Module 11: Professional Applications I				✓													
Module 12: Professional Applications II				✓							✓						
Module 13: Simulation I																	
Module 14: Simulation II																	
Business Education 10-20-30																	
Module 12: Dicta Typing 1			✓					✓	✓	✓							
Module 13: Dicta Typing 2								✓									
Module 14: Word Processing 1																	
Module 15: Word Processing 2			✓					✓	✓	✓	✓						
Module 16: Business Simulation																	
Computer Processing 10-20-30																	
Module 1: Computer Information Systems																	
Module 2: Overview of Software																	
Module 3: Applications: Data Entry					✓												
Module 4: Applications: Word Processing																	
Module 5: Applications: Computer Simulations																	
Module 6: Applications: Data Base					✓												
Module 7: Applications: Electronic Spreadsheet						✓											
Module 8: Overview of Introductory Programming Language																	
Module 9: Fundamentals of Input/Output																	
Module 10: Intro to Advanced Computer Programming Techniques														✓			
Module 11: Advanced Computer Programming Techniques															✓		
Module 12: Extended Programming Project																✓	✓
Module 13: Intro to Second Programming Language																	
Module 14: Applications in Second Programming Language																	
Module 15: Extended Project in Second Programming Language																	
Module 16: Graphics																	
Module 17: Systems Analysis and Program Development																	
Module 18: Machine/Assembly Language																	✓

† September 1997: All practical arts courses replaced by Career and Technology Studies.

Linkages/Transitions

H.14/ Information Processing, CTS
(1997)

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